## TABLE 6

HEAT RELEASED BY THE COMBUSTION OF THE PRINCIPAL COMBUSTIBLES AT CONSTANT PRESSURE. WATER ASSUMED TO REMAIN AS VAPOR

| Burned Unit Weight | Molecular Formula | Molecular Weight | Reaction of Formula | B.t.u Per Pound | B.t.u Per Cu.Ft. | B.t.u Per Ounce Molecule | Calories per Gram Molecule |
|---|---|---|---|---|---|---|---|
| Hydrogen. | $H_2$ | 2 | $H_2 + 0.5O_2 = H_2O$ | 52,3 | 293. | 6,54 | 58.2 |
| Carbon to | C | 12 | $C + 0.5O_2 = CO$ | 4,41 | 148. | 3,30 | 29.4 |
| Carbon oxide | CO | 28 | $CO + 0.5O_2 = CO_2$ | 14.6<br>4,36 | 491<br>343. | 1098<br>7,67 | 68.2 |
| Methane .. | $CH_4$ | 16 | $CH_4 + 2O_2 = CO_2 + 2H_2O$ | 21,9 | 983. | 21,9 | 195.2 |
| Acetylene. . | $C_2H_2$ | 26 | $C_2H_2 + 2.5O_2 = 2CO_2 +$ | 21,1 | 1536 | 34,3 | 304.9 |
| Ethylene .. | $C_2H_4$ | 28 | $C_2H4+3O_2==2CO_2+2H_2$ | 20,5 | 1610 | 35,9 | 319.6 |
| Ethane ..... | $C_2H_6$ | 30 | $C_2H_6 + 3.5O_2 = 2CO_2 +$ | 20,3 | 1812 | 38,2 | 339.9 |
| Benzene | $C_6H_6$ | 78 | $C_6H_6 + 7.5O_2 = 6CO_2 +$ | 17,3<br>3.89 | 3779<br>348 | 84,3<br>7.78 | 750.2 |
| Sulphur .... | S | 32 | $S + 1.5O_2 = SO_3$ | 5,16 | 462. | 10,3 | 91.8 |
| Evaporation of water | | | | 1.07 | 54 | 1.20 | |

Low values are given for B.t.u. and calories released by different substances. Various authorities differ on these values. The values given are from *Les Sources de L'ttneryie Calorifique,* by Damour, Carnot and Rengade.